

## **Aprilis Holographic Data Storage Rides to the Rescue**

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It's all about the density, specifically storage density when backing up disk farms these days. Tape is cheap, but relatively slow while faster storage mechanisms such as CD and DVD mechanism have taken a while to come down in pricing. While the typical cost of a CD-R or -RW disk is in the neighborhood of \$1 per 660 MB disk, off-the-shelf costs of DVD variants remains high, anywhere from \$5 or more for a 4.7GB disk. Consider that a typical disk drive these days is anywhere from 80-120 GB and larger, then do the math for the number of disks necessary for a full backup. Add on the cost of managing and storing those disks on a regular basis. It's an ugly problem only to continue to get uglier as drive manufacturers continue to build better products.

Aprilis is taking a shot at the storage density problem and has released a proprietary WORM (Write Once, read many) holographic storage media. Available today in a 120 mm disk and a 50 x 50 mm card, it is the first commercially available holographic storage media for the removable market. Basically, the new media and storage device combination can support up to 200 GB per disk and a data transfer rate of 200 MB/s in a CD/DVD form factor, or much faster than either a cranked DVD/CD writer can handle.

Originally funded by the U.S. government back in 1998, the specialized media can support rapid recording and retrieval of data at speeds of at least 1 Gigabit/second. Aprilis, based in Maynard, Mass., commenced operations in 1999 and their product is available immediately for both archival and near-line removable storage applications, including image databases, document and data warehousing.

The company is likely to be chased on a couple of different fronts. In February, standards for "Blu-Ray" blue laser technology were established to initially cram 27 GB of storage on a single disk, with the ultimate goal to put up to 50 GB onto a single disk with dual-layered media. Lucent spin-off InPhase Technologies is developing a holographic media and drive system to ultimately store "hundreds" of gigabytes onto a single disk and expects to ship first products at the end of 2003. The first-generation write-once product will hold 100 GB of data with transfer rates of around 20 MB/s. InPhase may have a slight advantage, claiming media reliability in the 30 year range, while Aprilis is only claiming a 10 year shelf life.